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## We Don't Know Basic Facts About Biology of Racial Traits

"WHY ARE Negroes black?" has been a subject of learned discussion since Aristotle. Today we still know too little about a question that deserves ample ventilation, since no deeper trait is ever found to be so consistent a mark of any racial group as color is in man. Nevertheless, whatever the reasons, skins do come in black and white, and we ought to know what we can about the elementary biology of the difference.

In an exchange of letters in *Science* magazine, Stanford biophysicist Dr. M. Scott Blois points out that the black pigment (melanin) is found very widely throughout nature, in mushrooms, bananas and insects as well as most birds and mammals. Only the white-furred animals of the Arctic and some cave-dwellers are essentially free of it.

In man, only the weakly albino mutant is melanin-free. "Whites" differ from "blacks" only in the relative amount of skin pigment and may of course produce abundant amounts of it in hair and eyes.

MODERATE AMOUNTS of melanin are therefore characteristic of most animal life. Its most obvious function is to shield deeper parts of the body from injurious exposure to sunlight. The overproduction of Vitamin D in the skin, which has been discussed recently, is only one special case of chemical reactions induced by light. It is not likely to be the main story since overdoses of Vitamin D must be relatively enormous to be toxic.

That we store beverages and drugs in brown glass should remind us of the generality with which complex molecules deteriorate upon exposure to light. Besides the skin and eyes, deeper parts of the brain respond directly to light. How this is affected by pigmentation we do not know.

The problem is of course inverted, like so many discussions by white about black. In fact, why are whites white? How could depigmented mutants flourish in the face of the obvious biological disadvantage of

the loss of melanin? Do the trappings of civilization merely cover up an inherent defect which is maintained primarily by tradition, fancy and social discrimination?

We can only speculate about a few historical biological answers that apply to special habitats, answers like those we invoke for white foxes and polar bears: concealment on winter snow; wearing opaque animal skins in cold climates; perhaps the need to achieve as much Vitamin D synthesis as feeble Arctic sun will allow. The present-day geography of black skin does not follow any sensible pattern, but if anything, it is characteristic of humid heat rather than direct sunshine.

This emphasizes that black skin should speed the dissipation of body heat by infrared radiation, which would be only disadvantageous in colder climates. There is unfortunately only folklore, rather than scientific biology, about the merits of a black skin for keep-

ing cool and vigorous in climates like those typical of urban summers in the United States.

MOST OF these points are already popular tradition. Unlike most fantasies about race biology, however, they ought to be amenable to unbiased scientific investigation. Many more important questions, like how to recognize the specific potentials of an individual child's brain, are beyond the reach

Bigots and reformers alike must be humbled to realize the poverty of our knowledge of human biology at even the most superficial levels. Without this knowledge, "equal opportunity" will remain a farce. In our present ignorance, man's life is a footrace of clipped eagles.